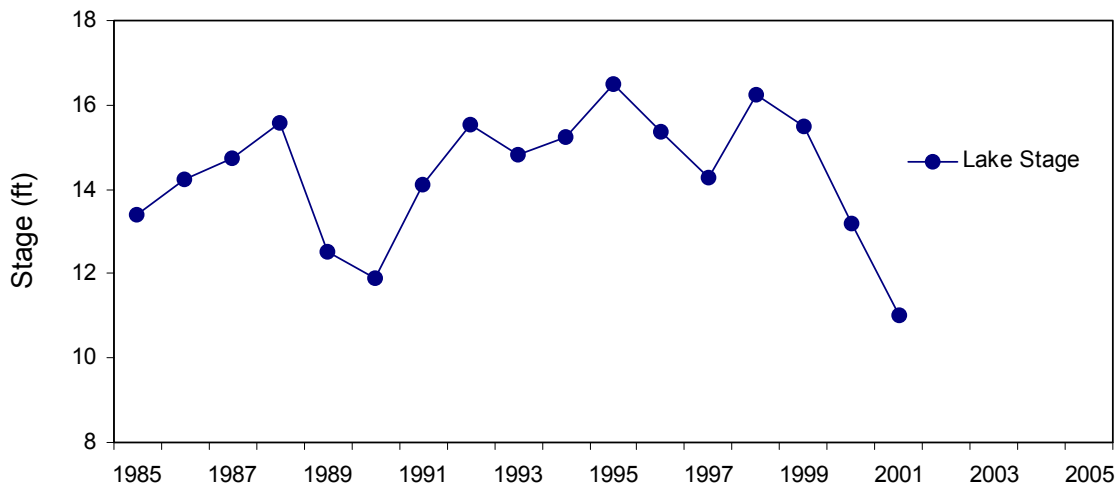
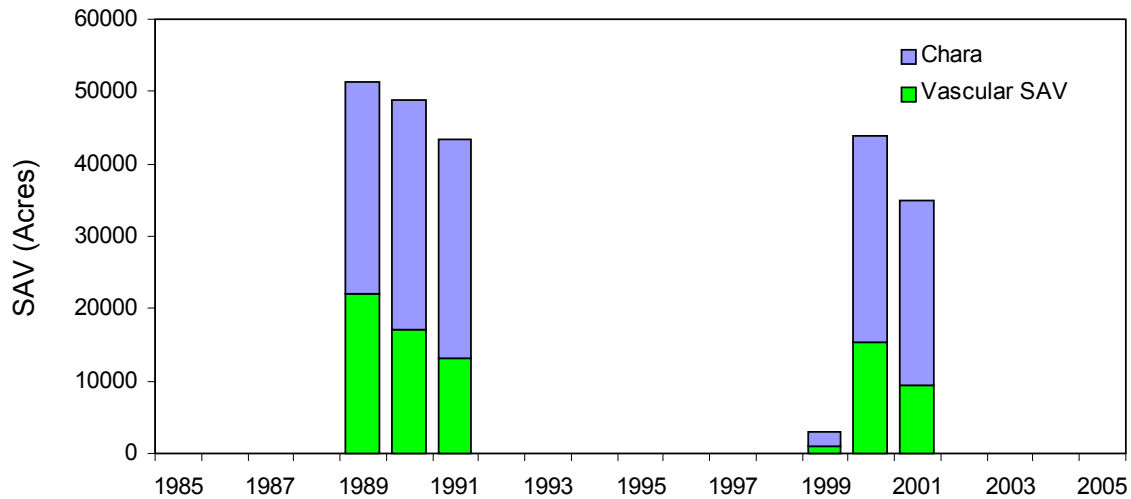


2001 Report Card for Submerged Aquatic Vegetation in Lake Okeechobee

- I. **Restoration Target:** The restoration target is to sustain at least 40,000 total acres of submerged aquatic vegetation (SAV) around the north, west, and south shoreline of the lake, with at least 20,000 acres contributed by vascular plants (in particular eelgrass and peppergrass).
- II. **Significance and Background:** In shallow eutrophic lakes, the submerged vegetation plays a critical role in stabilizing sediments, supporting attached algae that removes phosphorus from the water, and providing critical habitat for fish, wading birds, and other wildlife. Vascular plants provide the most valuable habitat, while *Chara*, a macro-alga that is common in this and other shallow eutrophic lakes, serves to stabilize sediments but is not as useful for wildlife. Shoreline areas of Lake Okeechobee have supported a large acreage of submerged vascular plants in years with moderate to low water levels, but the acreage has been reduced to near zero following multiple years with very high water. A reduction in the occurrence of high water levels under CERP (Comprehensive Everglades Restoration Program) is expected to cause widespread increases in the submerged aquatic vegetation in Lake Okeechobee. This in turn will give rise to clearer water, help to lower phosphorus concentrations, and provide conditions conducive to a healthy community of fish, wading birds, and other wildlife. The extent to which fish and birds will recover following a sustained recovery of these plants remains to be seen, and is a major focal area of ongoing research.
- III. **Recent Status and Trends:** When spatial extent of the submerged aquatic vegetation was measured by the University of Florida during and just after a period of low lake stage and regional drought in 1989-91, between 43,000 and 51,000 total acres were found. Between 13,000 and 22,000 acres were due to vascular plants, with the remainder due to *Chara*. Submerged vegetation was not sampled between 1991 and 1997. In 1998, after many years of high lake stage, a rough estimate by the Florida Fish and Wildlife Conservation Commission indicated that only 3,000 acres of total submerged vegetation remained in the lake. A detailed survey was conducted by the SFWMD in 2000, immediately after a managed lake recession. The survey indicated that the community had recovered to near 45,000 total acres, with over 15,000 acres due to vascular plants. Much of the submerged vegetation was lost when an extreme drought in 2001 dropped water levels below 9 ft, a historic low for this lake. However, in late summer 2001, approximately 6 weeks after stage increased again to over 12 ft, the community began to recover. At the end of the 2001 summer growing season (September) the lake supported approximately 34,000 total acres of submerged plants, with just over 9,000 acres of vascular plants.



- IV. **CERP Indicator Grade:** The indicator grade was red (bad conditions) until 2000, when the SFWMD lowered the lake in a managed drawdown, allowing the vegetation to recover. Projects are not yet in place to ensure long-term survival of large beds of submerged aquatic vegetation in the lake.
- V. **CERP Restoration Actions:** The Aquifer Storage and Recovery pilot project is proceeding on schedule. ASR is one of the most important features in CERP for reducing the occurrence of high depths in the lake.

- VI. Fish and Wildlife Response:** A simple conceptual diagram illustrates that fish and wading birds are expected to increase with increasing SAV, but that the exact relationship is uncertain.

